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Plant Zone Indicators of the Bay Region

This is the first report on the Research Problems. It is preliminary and is open to discussion and contributions.

Herewith is presented a list of plant indicators for two Life-zones of the Bay Region, derived from Hall and Grinnell's lists for California.

In regard to nomenclature some explanations must be made. In the first place the Latin names have been changed in a few instances to conform to those used by Jepson in his "Flowering Plants of California," because the latter work is more recent, readily available, and widely used. Secondly, the names have been simplified by using varietal designations only where they were necessary for identification. Thus the full scientific name of our Baneberry is "Actaea spicata L. var. arguta Torr.", but it is here listed simply as "Actaea spicata," for there is only one Baneberry in California, and hence no possibility of confusing the zone-indicator plant with any other.

Common names are often in a state of such loose and senseless usage that it is difficult to make a list which will accurately and appropriately designate only the intended plants. Indeed it might be thought better to omit them from a work of this kind.

In compiling this list of popular names the following rules have been followed: A: No name has been accepted that has been used to designate more than one species; B: Where there are a number of names to choose from, as is often the case, that one has been selected which seems to be the most descriptive, or otherwise most appropriate; C: A general preference has been shown for the popular names found in popular books rather than for those given in scientific works; D: Where there is no available common name, one is proposed, or none is given. A few examples will illustrate:

Acer negundo has two common names, Ash-leaf Maple and Box Elder. In favor of the first is the fact that it is a Maple, and has Ash-like leaves; against the second is that it is not an Elder, and in no way resembles a box. Why perpetuate a misnomer when an excellent name is at hand?

The *Castillejas* are commonly called Paint-brush, some are called also Painted-cup. The first name is appropriate for the blooms resemble brushes; the second name is ridiculous, for there is nothing cup-like about these flowers.

Lilium pardalinum is popularly known both as Leopard Lilly and as Tiger Lilly. It is, however, spotted like a leopard, and not striped like a tiger, hence the listing of the first name.

Quercus agrifolia and *Quercus wislizenii* present another problem. Their book names are Coast Live Oak and Interior Live Oak, but their most popular names are both Live Oak, hence a confusion, all the greater because other evergreen oaks are likewise known as Live Oak. But as *Quercus agrifolia* is also called Holly Oak, in reference to its leaves, and *Quercus wislizenii*, though it is derived from the Latin name, is not Wis. Oak, but is both spelled and pronounced Wiz. Oak, the list proposes that these more distinctive though less known names be given a more extended usage.

Upper Sonoran Zone

Trees

<i>Cupressus sargentii</i>	Sargent Cypress
<i>Juniperus californica</i>	California Juniper
<i>Pinus sabiniana</i>	Digger Pine
<i>Quercus douglasii</i>	Blue Oak
<i>Quercus agrifolia</i>	Holly Oak (Coast Live Oak)
<i>Quercus wislizenii</i>	Wiz. Oak (Interior Live Oak)
<i>Ptelea baldwinii</i>	Hop Tree
<i>Aesculus californica</i>	Buckeye

Shrubs

<i>Quercus dumosa</i>	Scrub Oak
<i>Ptelea baldwinii</i>	Hop Tree
<i>Eriogonum fasciculatum</i>	Bush Buckwheat
<i>Dendromecon rigida</i>	Bush Poppy
<i>Dicentra chrysanthia</i>	Golden Dicentra
<i>Ribes aureum</i>	Golden Currant
<i>Adenostoma fasciculatum</i>	Chamise
<i>Cercocarpus betuloides</i>	Mountain Mahogany
<i>Photinia arbutifolia</i>	Toyon
<i>Prunus ilicifolia</i>	Islay
<i>Pickeringia montana</i>	Chaparral Pea
<i>Rhus diversiloba</i>	Poison Oak
<i>Rhus trilobata</i>	Three-lobe Sumack
<i>Ceanothus cuneatus</i>	-----
<i>Arctostaphylos glandulosa</i>	Eastwood Manzanita
<i>Arctostaphylos glauca</i>	Big-berry Manzanita
<i>Arctostaphylos manzanita</i>	Parry Manzanita
<i>Fraxinus dipetala</i>	Bushy Ash
<i>Sphaeole calycina</i>	Pitcher Sage
<i>Artemesia californica</i>	California Sage-brush
<i>Ericameria arborescens</i>	Golden Fleece

Herbs

Castilleja foliolosa

Woolly Paint Brush

Transition Zone

Trees

<i>Abies concolor</i>	White Fir
<i>Cupressus macrocarpa</i>	Monterey Cypress
<i>Libocedrus decurrens</i>	Incense Cedar
<i>Pinus lambertiana</i>	Sugar Pine
<i>Pinus ponderosa</i>	Yellow Pine
<i>Pinus radiata</i>	Monterey Pine
<i>Pseudotsuga taxifolia</i>	Douglas Fir
<i>Sequoia sempervirens</i>	Redwood
<i>Taxus brevifolia</i>	Short-leaf Yew
<i>Torreya californica</i>	Long-leaf Yew
<i>Castanopsis chrysophylla</i>	Giant Chinquapin
<i>Lithocarpus densiflora</i>	Tan Oak
<i>Quercus chrysolepis</i>	Maul Oak
<i>Quercus kelloggii</i>	California Black Oak
<i>Acer negundo</i>	Ash-leaf Maple
<i>Cornus nuttallii</i>	Large-flower Dogwood
<i>Arbutus menziesii</i>	Madroño

Shrubs

<i>Corylus rostrata</i>	Hazelnut
<i>Physocarpus capitatus</i>	Nine Bark
<i>Rubus spectabilis</i>	Salmon-berry
<i>Rubus leucodermis</i>	Wild Raspberry
<i>Rubus parviflorus</i>	Thimble-berry

Ceanothus integerrimus	Deer Brush
Ceanothus thyrsiflorus	California Lilac
Aralia californica	California Aralia
Gaultheria shallon	Salal
Rhododendron californicum	California Rhododendron
Rhododendron occidentale	Western Azalea
Vaccinium ovatum	Huckleberry
Herbs	
Lilium pardalinum	Bog Leopard Lilly
Scoliopus bigelovii	Stink Pod
Trillium ovatum	Wake-robin Trillium
Trillium sessile	Sessile Trillium
Iris missouriensis	Western Blue Iris
Asarum caudatum	Wild Ginger
Actaea spicata	Baneberry
Tellima grandiflora	Fringe-cups
Whipplea modesta	-----
Fragaria californica	Wood Strawberry
Fragaria chilensis	Beach Strawberry
Viola sarmentosa	Yellow Creeping Violet
Anaphalis margaritacea	Marguerite Everlasting
Antennaria argentea	Silver Everlasting
Petasites palmata	Sweet Coltsfoot

In making use of these plant indicators to identify life zones it should be borne in mind that between two zones there is commonly a transitional area where indicators from the adjoining zones may be found intermixed. Also that imbedded in one zone there may be isolated islands or projecting peninsulas of another zone, due to the limited presence within the former of a slope exposure, air current, or other conditions favorable to the life requirements of the latter.

The Upper Sonoran and the Transition are the two widespread life zones in the Bay Region, and therefore the regional indicators have been first compiled for them. It would be useful, however, to make also a similar list for the Lower Sonoran; partly because there may be found areas of this zone along the eastern borders of the Bay Counties, or at least infiltrations of Lower Sonoran forms (as witness the Bush Tobacco, *Nicotiana glauca*, in Tesla Pass and canyon); and partly because the Lower Sonoran Zones on the west side of the San Joaquin Valley, and south of Hollister and of Salinas, are within a day's birding trip from the Bay Region.

Herman de Fremery.

Assisting Mr. de Fremery in this project were: Mrs. H. P. Bracelin and Mrs. A. B. Stephens.



The July Field Trip was taken Sunday, the 12th, in Golden Gate Park. When nineteen members and friends assembled at the Tenth Avenue entrance to the Park the sky was overcast and a cool wind was blowing. Later in the forenoon the sun shone forth.

Robins and English Sparrows were feeding their young under the pollard sycamores at the Music Concourse. Western Flycatchers were feeding their young in the Japanese Tea Garden. Linnets, Nuttall Sparrows and Pine Siskins were bathing in the pool under the willows. In the trees around the new rose garden Olive-sided Flycatchers were calling. This species is evidently more numerous in the Park this summer than usual.

A Turkey Vulture was observed. It seems odd to class this bird as rare in any sense of the word but it is rare in the Park. Another rare summer visitant was the Mourning Dove.

Luncheon was eaten at the Chain of Lakes, after which the walk was continued to the Cliff House. The final goal was the nest of the Pigeon Guillemots beyond Sutro Baths. The nest was empty, but two birds were found out in the water. One of these flew in toward the shore giving us an excellent view of itself.

Birds observed in the Park were as follows: Mallard, Pintail and Ruddy Ducks; Turkey Vulture; Quail; Coot; Mourning Dove; Anna and Allen Hummingbirds; Kingfisher; Black Phoebe; Western and Olive-sided Flycatchers; Chickadee; Bush-tit; Vigors Wren; Robin; Russet-backed Thrush; Hutton Vireo; Yellow and Pileolated Warblers; Brewer Blackbird; House Sparrow; Linnet; Pine Siskin; Green-backed Goldfinch; Spotted Towhee; Junco; Nuttall and Song Sparrows.

At the Cliff House: Brown Pelican; Farallon Cormorant; White-winged Scoter; Western and Heermann Gulls; Pigeon Guillemot.

A total of thirty-six species.

Cornelia C. Pringle, historian.



Audubon Notes

August Meeting will be held on Thursday, the 13th, at 8 p. m., room 19, 2nd floor, Ferry Building.

The evening will be devoted to vacation experiences. Visitors as well as members are invited to contribute to the evening's entertainment.



August Field Trip will be taken Sunday, the 16th, to Tennessee Cove, Marin County. Purchase round trip tickets to Manzanita 48c, and take 8:45 a. m. Sausalito Ferry. Bring luncheon and filled canteens. Leader, Chas. A. Bryant.



July Meeting: The 173rd regular meeting was held on July 9th, in room 19, Ferry Building, with thirty-one members and guests present. 2nd Vice President, Miss Cornelia Pringle presiding.

Mrs. M. E. Gaines of Oakland was elected to membership.

Field observations were reported as follows:

Mrs. Otis H. Smith: June 21st, near Phoenix Lake, Black-throated Gray

Warbler feeding young. This observation was also made by Mr. Charles Bryant with Mr. and Mrs. Stephens on June 28th.

Mr. Bremer: June 28th, Crystal Springs Dam, fourteen Canada Geese.

The evening was given over to talks by members on favorite birding places. Mrs. Cummings told of the birds at Vera Lake near Nevada City; Mrs. Otis Smith of the birds of Marin County; Mrs. Stephens of the birds of Golden Gate Park, and Harold Swanton of birds of the High Sierra country.

Following these short talks Mr. Angelo Hewetson, of Alameda, exhibited upon the walls twenty-six of his beautiful drawings of birds, some of which were in color. A lover of birds and self-taught in the art of free hand drawing Mr. Hewetson gave a brief account of his technique, as well as speaking of individual birds.

Commander Parmenter showed his life list containing a record of observations over a period of ten years. Compiled with great care and very complete in data, it attracted a great deal of interest from those present.

Audubon Association of the Pacific For the Study and the Protection of Birds

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Monthly meeting second Thursday, 8 P. M., Room 19, Ferry Building.
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